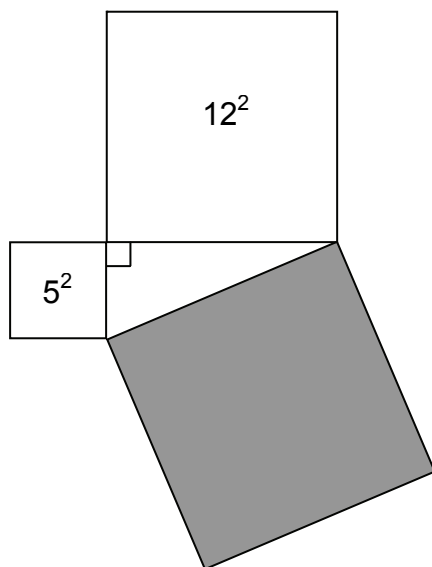




- 1 The area of a square is 112 square inches. Which of these is the closest to the length of the side of the square?

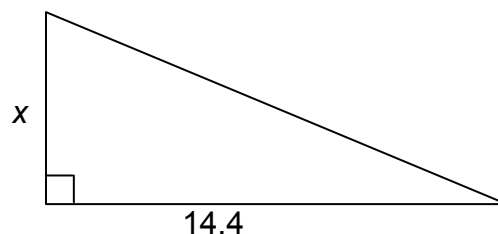
A 10.3 inches
B 10.6 inches
C 10.9 inches
D 11 inches

- 2 Which of the following expressions does NOT represent the area of the shaded square in the figure below?



A $5^2 + 12^2$
B 13^2
C 17^2
D 169

- 3 Shown below is a right triangle with side lengths of 14.4 units, x units, and 15.6 units.



Which equation could be used to determine the value of x ?

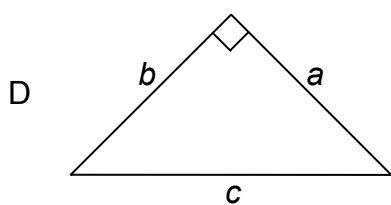
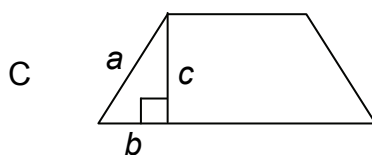
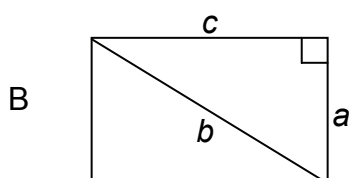
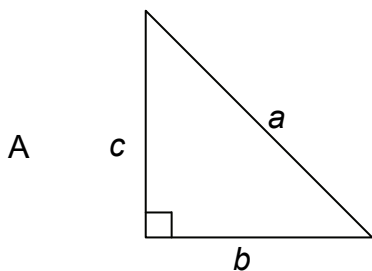
A $x^2 + 14.4^2 = 15.6^2$
B $15.6^2 + x^2 = 14.4^2$
C $14.4^2 + 15.6^2 = x^2$
D $x + 14.4 = 15.6$

- 4 A baseball diamond is a square where the distance between 2 consecutive bases is 90 feet. If the catcher throws a ball from home plate to second base, what is the approximate distance the ball will travel?

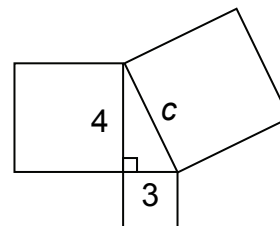
A 90 feet
B 127 feet
C 180 feet
D 360 feet



- 5 Which diagram shows the relationship $a^2 + b^2 = c^2$?



- 6 What is the length of side c ?



- A 5 units
- B 7 units
- C 16 units
- D 25 units

- 7 Which of the following irrational numbers is closest to 4?

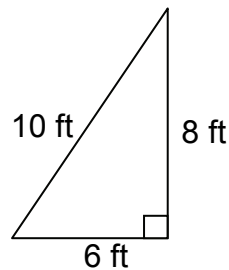
- A $\sqrt{4}$
- B $\sqrt{8}$
- C $\sqrt{17}$
- D $\sqrt{24}$



- 8 Which of the following statements is true about the value of $\sqrt{13}$?

A The value of $\sqrt{13}$ is about 3.1.
B The value of $\sqrt{13}$ is about 3.3.
C The value of $\sqrt{13}$ is about 3.6.
D The value of $\sqrt{13}$ is about 3.9.

- 9 Which of the following situations could be represented by the drawing below?

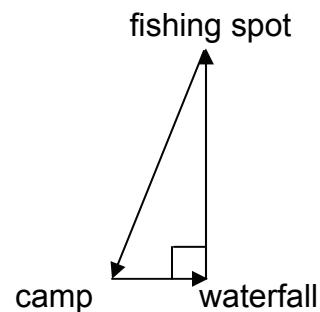


A A rectangular sandbox measures 6 feet by 8 feet. The length of the diagonal of the box is 10 feet.
B A rectangular gate has dimensions of 6 feet and 10 feet. The diagonal of the gate is 8 feet.
C A 6-foot ladder is placed against a 10-foot wall. The base of the ladder is 8 feet from the wall.
D A frame has a width of 8 inches and a length of 10 inches. The diagonal of the frame is 6 inches.

- 10 A square gate has a wooden brace across the diagonal. The perimeter of the gate is 20 feet. What is the approximate length of the brace?

A 50 feet
B 7.1 feet
C 6.8 feet
D 5.1 feet

- 11 Reggie hiked $\frac{1}{2}$ mile east from his camp to see a waterfall. He then hiked 1.2 miles north to his favorite fishing spot. After fishing, he headed back to his camp as indicated in the diagram below. How far did Reggie hike altogether?



A 1.3 miles
B 1.7 miles
C 2.5 miles
D 3 miles